

CLAIMS

What is claimed is:

- 5 1. A gasket for sealing a joint between first and second components in a fuel cell assembly, comprising:
- a) a planar region having an at least one opening therein for passage of gas between said first and second components; and
- b) a non-planar region surrounding said at least one opening and
- 10 extending from said planar region and defining a closed gas-filled pillow structure for sealing said joint between said first and second components.
2. A gasket in accordance with Claim 1 comprising first and second gasket elements joined together, wherein at least one of said first and second
- 15 elements includes a concavity for cooperating with the other of said elements to form said gas-filled pillow structure.
3. A gasket in accordance with Claim 2 wherein at least one of said first and second elements is formed from metal.
- 20 4. A gasket in accordance with Claim 1 wherein said first and second components are selected from the group consisting of integrated component manifold, hydrocarbon reformer, heat exchanger, and fuel cell stack.
- 25 5. A fuel cell assembly comprising, a gasket for sealing a joint between first and second components in said fuel cell assembly, said gasket including
- a planar region having an at least one opening therein for passage of gas between said first and second components, and

a non-planar region surrounding said opening and extending from said planar region and defining a closed gas-filled pillow structure for sealing said joint between components.

5 6. A fuel cell assembly in accordance with Claim 5 wherein said assembly is an auxiliary power unit for a vehicle.

7. A fuel cell assembly in accordance with Claim 6 wherein said vehicle is selected from the group consisting of car, truck, boat, ship, airplane,
10 and space vehicle.

8. An automotive vehicle, comprising a fuel cell assembly for generating auxiliary power for said vehicle, said assembly including a gasket for sealing at least one joint between components in said fuel cell assembly, said
15 gasket including

a planar region having an at least one opening therein for passage of gas between components, and

a non-planar region surrounding said opening and extending from said planar region and defining a closed gas-filled pillow structure for sealing said joint
20 between components.